

Appln. No. 10/071,407

Amendment dated April 22, 2004

Reply to Office Action mailed January 22, 2004

REMARKS

Reconsideration is respectfully requested.

Claims 1 through 18 remain in this application. No claims have been cancelled, withdrawn, or added.

The Examiner's rejections will be considered in the order of their occurrence in the Office Action.

Paragraphs 1 through 3 of the Office Action

Claims 1 and 17 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over De Sousa (U.S. Pat. 5,972,290) in view of Kantor et al U.S. Pat. 6,375,983 B1).

Claim 1 requires, in part, "a scent vapor being located in the interior space of the bead such that application of pressure to the outer wall of the bead on the surface of the support releases the scent vapor from the interior space of the bead and into an environment exterior to the bead".

The De Sousa patent discusses and shows the use of a box 1 having a lower compartment 8 and an upper compartment 9 which are isolated from each other by a corner plate 9 that includes a small opening between the upper and lower compartments. See col. 3, lines 12 through 20 of De Sousa which describes this configuration:

The interior of the box 1 contains a lower compartment 8 and an upper compartment 12. The upper and lower compartments are separated by a corner plate 9, which extends from the rear of said box 1 until an intermediate section 9", forming a sort of channel in said compartment 8 and the housing for a disk processing mechanism. The lower compartment 8 has a rear space in which a small fan 11 is installed, for directing air toward a container 10 located in the forward section of the compartment 8.

The disk 15 is positioned in the upper compartment in an inverted condition so that capsules that are punctured on the disk 15 are positioned above the

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channel between the upper and lower compartments of the box. See, e.g., De Sousa at col. 3, lines 21 through 31:

The disk processing mechanism is of the kind that fits into a center orifice 14 of a disk 15 bearing small capsules of fragrances 16. The disk processing mechanism 13 operates with a perforation device 17 that is moveable by drive means (not shown) in a vertical direction and is equipped with a pointed element 18 that serves to selectively puncture the capsules 16 containing the fragrances. Therefore, these capsules 16 must be manufactured from an appropriate material that is suitable to be punctured by this pointed element 18.

The positioning of the punctured capsules above the channel is significant, because the De Sousa apparatus relies upon gravity to deliver the fragrance from the punctured capsule to the container 10, which is positioned below the disk 15, but more importantly, is positioned in the lower compartment 8 where the fan 11 is creating the air flow that carries the fragrance out of the interior of the box. (Note that from Figures 1 and 2, one of ordinary skill in the art realizes that any air flow into the upper compartment is severely restricted, if not completely prevented, by the relatively small opening section 5 in the moveable drawer.) See, e.g., the De Sousa patent at col. 3, lines 38 through 53 (emphasis added):

The equipment is turned on at the beginning of the event, and then in synchronization with the sequence of the scenes that are being shown, and whenever a specific fragrance is required, the mechanism turns the disk 15 and places the respective fragrance capsule that is required under the device 17, in order that with an up and down vertical motion of device 17, capsule 16 is pierced with the pointed element 18. At that instance, the scenting substance or compound contained in the foregoing capsule 16 is released into the container 10. The small fan 11 turns on, drawing air through the small rear orifices 7 producing a draft in compartment 8 under plate 9 for dispersing the fragrance through the small forward orifices 2. In this fashion the fragrance is released into the environment in which the event is being held, spreading throughout the environment and thereby creating an atmosphere of reality for the audience.

Thus, a significant factor in the functioning of the De Sousa apparatus is the movement of the fragrance downwardly from the punctured capsule on the disk to the container 10 so that the moving air can act upon the fragrance

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and distribute it outside of the box. If the fragrance does not drop downwardly from the disk into the container, the fragrance is not distributed by the fan's air flow.

It is submitted that one of ordinary skill in the art, considering the discussion in the De Sousa patent and the manner in which the De Sousa apparatus functions, would not be led to modifying the De Sousa apparatus to employ "a scent vapor being located in the interior space of the bead", as this would not provide any assurance that the fragrance of De Sousa would actually be acted sufficiently upon by gravity to move the fragrance into the container 10 of De Sousa so that the air flow from the fan could act upon it. More likely, one of ordinary skill in the art would understand that any attempt to place a "scent vapor" into the capsules of De Sousa would result in the fragrance remaining in the upper compartment of the De Sousa box and out of the air flow that exists in the lower compartment. Clearly, one of ordinary skill in the art would understand that a fragrance in the form of a liquid or a gel would be infinitely more suitable for the capsules of De Sousa to assure that the fragrance drops into the container 10 of De Sousa.

It is therefore submitted that the cited patents, and especially the allegedly obvious combination of De Sousa and Kantor set forth in the rejection of the Office Action, would not lead one skilled in the art to the applicant's invention as required by claim 1. Further, claims 2 through 18, which depend from claim 1, also include the requirements discussed above and therefore are also submitted to be allowable over this allegedly obvious combination.

Withdrawal of the §103(a) rejection of claims 1 and 17 is therefore respectfully requested.

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Paragraph 4 of the Office Action

Claims 1, 2, 9 and 10 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Tebbe (U.S. Pat. 5,734,590) in view of Kantor et al.

Claim 1 requires, in part, "a scent vapor being located in the interior space of the bead such that application of pressure to the outer wall of the bead on the surface of the support releases the scent vapor from the interior space of the bead and into an environment exterior to the bead".

The Tebbe patent describes a system in which a liquid scent is employed to scent the air. The scenting of the air is accomplished in most embodiments by bubbling air through the liquid scent. See, e.g., Tebbe at col. 6, lines 11 through 15:

A line attached to the outlet of the solenoid valve 56 is immersed in a volume 62 of liquid scent, so that, by controlling the rate at which the air bubbles through, scents are released in a controlled manner.

And again at col. 9, lines 28 through 32:

In a recreational device shown in FIG. 3 it is also possible to use as the carrier gas which bubbles through the scent 62 oxygen or oxygen-enriched air. It will be understood that a small compressor can be used instead of a compressed air bottle.

And further at col. 12, lines 38 through 58:

Three scent containers 262-1, 262-2 and 262-3 holding liquids containing different scents stand on the circular portions of the plate remaining between the openings 258. The head space above the level of the liquid of the scent containers 262 can be placed under pressure by means of a pump 264 indicated merely schematically in the drawing. Immersed in the volume of liquid is the lower end of a spray tube 266, the delivery end of which can be opened and closed by a solenoid valve 268. The solenoid valves 268 are actuated in a pulse-duration-modulated manner to control the intensity of the scent released. This is provided by a control circuit 270 which receives at one input the scent control signal of the decoder 242. As soon as any scent control signal is present, the control circuit 270 sets the motor 256 in operation. According to the type of scent control signal transmitted, the control circuit 270 then determines which of the

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solenoid valve(s) is (are) to be actuated and how the relationship between open time and closed time is to be set. The scents released by the spray tubes 266 are rapidly conveyed into the surroundings by the curtain of air produced by the tangential fan 254.

It is therefore submitted that one of ordinary skill in the art, considering the Tebbe disclosure, would understand that Tebbe employs a liquid scent for his invention, and nothing in the Tebbe patent suggests otherwise. In fact, any attempt to modify the Tebbe system by using a "scent vapor" would render these embodiments useless, as it would be virtually impossible to effectively "bubble" air through a "scent vapor".

It is therefore submitted that the cited patents, and especially the allegedly obvious combination of Tebbe and Kantor set forth in the rejection of the Office Action, would not lead one skilled in the art to the applicant's invention as required by claim 1. Further, claims 2 through 18, which depend from claim 1, also include the requirements discussed above and therefore are also submitted to be allowable over this allegedly obvious combination.

Withdrawal of the §103(a) rejection of claims 1, 2, 9 and 10 is therefore respectfully requested.

Paragraph 5 of the Office Action

Claims 1, 2 and 6 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Geiser (U.S. Pat. 3,640,629) in view of Kantor et al.

Claim 1 requires, in part, "a scent vapor being located in the interior space of the bead such that application of pressure to the outer wall of the bead on the surface of the support releases the scent vapor from the interior space of the bead and into an environment exterior to the bead".

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The Geiser patent discusses the incorporation of "perfumes, colognes, and the like" into a sheet material so that when the sheet material is rubbed against the skin of the user, the perfume, cologne, etc. is distributed to the skin of the user for scenting the skin of the user as perfumes and colognes do. The Geiser patent clearly discloses that these perfumes, colognes, and the like" are liquids that are transferable to the body of the user. See, e.g., Geiser at col. 2, lines 35 through 51 (emphasis added):

As hereinbefore set forth, the sheet material carries microcapsules containing perfume, cologne or the like. Here again, microencapsulation is well known in the art and no novelty is claimed herein for the particular method of microencapsulation or for a particular perfume, cologne, etc., to be encased in the capsule. Accordingly, any suitable method may be used for microencapsulation and may include, for example, urea-formaldehyde capsules prepared by forming a precondensate and agitating with the perfume or cologne recipe. The urea-formaldehyde precondensate condenses into small microscopic capsule shell walls which contain the liquid composition enclosed therein. In another method, the encapsulating material is a starch acid-ester which is formed as a dispersion and the perfume or cologne recipe is commingled therewith and then the emulsion is spray dried to form the microcapsules containing the liquid therein.

The Geiser patent makes it clear that its system is intended to be a carrier for the perfume and cologne before the perfume or cologne is transferred to the body of the user. See, e.g., Geiser at col. 4, lines 3 through 7:

In use, the top layer is withdrawn and pressed against the body to rupture the capsules and to dispense the perfume or cologne. In another embodiment, the sheet material is rolled into tape form and the user merely teas off a strip and then presses the strip against the body.

It is therefore submitted that one of ordinary skill in the art, considering the Geiser patent, would not be motivated to modify the liquid perfume or cologne to be a "scent vapor" as this would be contrary to the purpose of transferring perfume or cologne to the body of the user, as it would make the Geiser system less efficient at transferring the perfume or cologne to the user's body when the system is rubbed against the body of the user. It is submitted that one of ordinary skill in the art would appreciate this, and

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would not modify the Geiser system in a manner that would make it less efficient for its intended purpose.

It is therefore submitted that the cited patents, and especially the allegedly obvious combination of Geiser and Kantor set forth in the rejection of the Office Action, would not lead one skilled in the art to the applicant's invention as required by claim 1. Further, claims 2 through 18, which depend from claim 1, also include the requirements discussed above and therefore are also submitted to be allowable over this allegedly obvious combination.

Withdrawal of the §103(a) rejection of claims 1, 2, and 6 is therefore respectfully requested.

Paragraphs 6 through 7 of the Office Action

Claims 1 through 5, 9 and 16 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Khan (U.S. Pat. 5,097,376) in view of De Sousa and still in further view of Kantor et al.

Claims 7 and 8 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Khan in view of De Sousa and Kantor et al. as applied to claims 1 and 2 above, and further in view of Tebbe (U.S. Pat. 5,734,590).

Claim 1 requires, in part, "a scent vapor being located in the interior space of the bead such that application of pressure to the outer wall of the bead on the surface of the support releases the scent vapor from the interior space of the bead and into an environment exterior to the bead".

The Khan patent discusses several ways of including a fragrance in a tape cassette, including mixing the fragrance with the plastic prior to molding, applying as a film or microcapsule to the container or recording

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medium, impregnating into the pressure elements, and applying to the surface of the tape housing. See, e.g., col. 2, lines 40 through 59 (emphasis added):

Introduction of the fragrance material, which is incompatible with the plastic material, is advantageously effected by mixing during production of the plastic material, so that emergence may take place, in particular at room temperature, by exudation through the surface of the produced plastic part to the outside.

Advantageously, plasticizers or resins are mixed with the fragrance material.

In a further method of application, the fragrance material is applied to surfaces of films or of layers or of the container or of the cassette or of the recording medium by spraying on or knife coating, directly or in the form of microcapsules.

Furthermore, in the case of felt, fleece or foam material capable of absorbing liquid, it is advantageous to impregnate the said material with a liquid fragrance material.

Other known methods of introduction and application which are suitable for the generally oily fragrance materials can also be used.

Significantly, the Khan patent only identifies the fragrance in a liquid form, or in an application that would only be compatible with a liquid form of the fragrance. For example, one of ordinary skill in the art would recognize that a "scent vapor" could not be "mix[ed] during production of the plastic material", and "plasticizers or resins" could not be mixed with a "scent vapor", and that a "scent vapor" could not applied to a surface or be sprayed or "knife-coated" onto the tape medium, nor could a "scent vapor" be used to impregnate "felt fleece or foam material".

It is submitted that the Khan patent clearly leads one of ordinary skill in the art to employing a liquid or even solid form of a fragrance, simply because Khan discloses a number of methods of application that are inconsistent with the use of any "scent vapor", and the fact that the only form of the fragrance expressly set forth in Khan is a liquid form, and thus

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the Khan disclosure would not lead one of ordinary skill in the art to consider modifying the Khan system by attempting to employ a "scent vapor" in any of its forms of application.

It is therefore submitted that the cited patents, and especially the allegedly obvious combination of Khan, De Sousa, and Kantor set forth in the rejection of the Office Action, would not lead one skilled in the art to the applicant's invention as required by claim 1. Further, claims 2 through 18, which depend from claim 1, also include the requirements discussed above and therefore are also submitted to be allowable over this allegedly obvious combination.

Withdrawal of the §103(a) rejection of claims 1 through 5, 9 and 16 is therefore respectfully requested.

Withdrawal of the §103(a) rejection of claims 7 and 8 is therefore respectfully requested.

Paragraph 8 of the Office Action

Claims 11 through 15 and 18 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Tebbe in view of Kantor et al. as applied to claims 1, 2, 9 and 10 above, and further in view of EP 0313215 A2.

In view of the remarks set forth above regarding the allegedly obvious combination of Tebbe and Kantor, it is submitted that this combination is also not supportable in view of the disclosure of Tebbe and that claims 11 through 15 and 18 are allowable over the prior art.

Withdrawal of the §103(a) rejection of claims 11 through 15 and 18 is therefore respectfully requested.


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CONCLUSION

In light of the foregoing amendments and remarks, early reconsideration and allowance of this application are most courteously solicited.

Respectfully submitted,

LEONARD & PROEHL, Prof. L.L.C.

By 
Jeffrey A. Proehl (Reg. No. 35,987)
LEONARD & PROEHL, Prof. L.L.C.
3500 South First Avenue Circle, Suite 250
Sioux Falls, SD 57105-5807
(605)339-2028 FAX (605)336-1931

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